

IN THE CLAIMS:

1. (Original) A composition for use as a catalyst in oxidation or reduction reactions, the composition comprising platinum and copper, wherein (i) the concentration of platinum is greater than 50 atomic percent and less than about 80 atomic percent, and (ii) the composition has a particle size which is less than 35 angstroms (Å).
2. (Original) The composition of claim 1 wherein the sum of the concentrations of platinum and copper therein is greater than about 95 atomic percent.
3. (Currently Amended) The composition of claim 1 [[or 2]] wherein said composition comprises an alloy of platinum and copper.
4. (Currently Amended) The composition of claim 1 [[or 2]] wherein said composition consists essentially of an alloy of platinum and copper.
5. (Currently Amended) The composition of ~~one of the preceding claims~~ claim 1 wherein the composition has a particle size which is greater than about 20 angstroms and less than 35 angstroms.
6. (Currently Amended) The composition of ~~one of the preceding claims~~ claim 1 wherein the composition has a particle size which is greater than about 25 angstroms and less than 30 angstroms.
7. (Currently Amended) The composition of ~~one of the preceding claims~~ claim 1 wherein the concentration of platinum is greater than about 60 atomic percent and less than about 80 atomic percent.

8. (Currently Amended) The composition of ~~one of the preceding claims~~ claim 1 wherein the concentration of platinum is greater than about 65 atomic percent and less than about 75 atomic percent.

9. (Currently Amended) A supported electrocatalyst powder for use in electrochemical reactor devices, the supported electrocatalyst powder comprising the composition of ~~any one of claims 1-8~~ claim 1 on electrically conductive supports.

Claims 10-21. (Canceled)

22. (Original) A method for preparing a catalyst composition from a catalyst precursor composition, said precursor composition comprising platinum and copper, wherein the concentration of platinum therein is greater than about 20 atomic percent and less than about 40 atomic percent, the method comprising subjecting said precursor composition to conditions sufficient to remove a portion of the copper present therein, such that the resulting catalyst composition comprises platinum and copper, wherein the concentration of platinum therein is greater than 50 atomic percent and less than about 80 atomic percent.

23. (Original) The method of claim 22 wherein the composition has a particle size which is less than 35 angstroms ( $\text{\AA}$ ).

24. (Original) The method of claim 23 wherein the composition has a particle size which is greater than about 20 angstroms and less than 30 angstroms.

25. (Currently Amended) The method of ~~one of claims 22-24~~ claim 22 wherein the concentration of platinum is greater than about 60 atomic percent and less than about 80 atomic percent.

26. (Currently Amended) The method of ~~one of claims 22-25~~ claim 22 wherein the catalyst precursor composition is contacted with an acidic solution to solubilize a portion of the copper present therein.

27. (Currently Amended) The method of ~~one of claims 22-25~~ claim 22 wherein the catalyst precursor composition is subjected to an electrochemical reaction wherein a hydrogen-containing fuel and oxygen are converted to reaction products and electricity in a fuel cell comprising an anode, a cathode, a proton exchange membrane therebetween, the catalyst precursor composition, and an electrically conductive external circuit connecting the anode and cathode, the method comprising contacting the hydrogen-containing fuel or the oxygen and the catalyst precursor composition to oxidize the hydrogen-containing fuel and/or catalytically reduce the oxygen, and to dissolved *in situ* from the catalyst precursor composition copper present therein.

28. (Original) The method of claim 27 wherein the hydrogen-containing fuel consists essentially of hydrogen.

29. (Original) The method of claim 27 wherein the hydrogen-containing fuel is methanol.

30. (Currently Amended) The method of ~~one of claims 22-29~~ claim 22 wherein the concentration of platinum in the catalyst precursor composition is greater than about 25 atomic percent and less than about 35 atomic percent.

Claims 31-71. (Canceled)

72. (New) The composition of claim 2 wherein said composition comprises an alloy of platinum and copper.

73. (New) The composition of claim 2 wherein said composition consists essentially of an alloy of platinum and copper.

74. (New) The composition of claim 2 wherein the composition has a particle size which is greater than about 20 angstroms and less than 35 angstroms.

75. (New) The composition of claim 2 wherein the composition has a particle size which is greater than about 25 angstroms and less than 30 angstroms.

76. (New) The composition of claim 2 wherein the concentration of platinum is greater than about 60 atomic percent and less than about 80 atomic percent.

77. (New) The composition of claim 2 wherein the concentration of platinum is greater than about 65 atomic percent and less than about 75 atomic percent.

78. (New) A supported electrocatalyst powder for use in electrochemical reactor devices, the supported electrocatalyst powder comprising the composition of claim 2 on electrically conductive supports.

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PATENT

**CONCLUSION**

Applicants respectfully request entry of the claim amendments noted above, prior to examination of the application being filed concurrently herewith.

Upon entry of this Preliminary Amendment, claims 1-9, 22-30 and 72-78 are pending. Claims 3-9, 25-27 and 30 have been amended and claims 72-78 have been added for the purpose of removing multiple claim dependencies. Additionally, claims 10-21 and 31-71 have been canceled. Applicants hereby reserve the right to pursue the subject matter of these canceled claims in a divisional application during the pendency of this application.

It is believed that the filing fees are to be calculated based on the claims as presented herein. Accordingly, a check in the amount of \$1,150.00 is enclosed herewith. The Commissioner is however hereby authorized to charge any underpayment or credit any overpayment to Deposit Account No. 19-1345.

Respectfully submitted,



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